

REMARKS

This is intended as a full and complete response to the Office Action dated February 15, 2008. Please reconsider the claims pending in the application for reasons discussed below. Claims 9-13, 15-21, 23-29 and 31-32 are pending in the application. Claims 9-13, 15-21, 23-29 and 31-32 remain pending following entry of this response. Claims 16, 24 and 32 have been amended. Applicants submit that the amendments do not introduce new matter.

Further, Applicants are not conceding in this application that amended (or canceled) claims are unpatentable over the art of record, as the present claim amendments and cancellations are only for facilitating expeditious prosecution of the claimed subject matter. Applicants respectfully reserve the right to pursue these (pre-amended or canceled claims) and other claims in one or more continuations and/or divisional patent applications.

Claim Rejections - 35 U.S.C. § 102

Claims 9, 15-17, 23-25 and 31-32 stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by *Ling et al.* (U.S. Patent No. 6,961,388, hereinafter, "*Ling*"). Applicants respectfully traverse this rejection as follows.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). The elements must be arranged as required by the claim. *In re Bond*, 910 F.2d 831, 15 USPQ2d 1566 (Fed. Cir. 1990).

In this case, Applicants respectfully submit that *Ling* does not teach or suggest each and every element as set forth in the claims.

In the present case, Applicants respectfully submit that *Ling* does not teach or suggest all the claim limitations. For example, *Ling* does not teach or suggest "a

channel quality estimator coupled to the MIMO processor and configured to estimate characteristics of a plurality of transmission channels used for data transmission and to provide signal-to-noise and interference (SNR) information for one or more of the different spatial channels" as recited in claim 9. Further, *Ling* does not teach or suggest "*a transmit data processor configured to receive and process the SNR information for transmission on a reverse link*" as recited in claim 9.

The Examiner refers to FIG. 1 of *Ling* as teaching a MIMO processor (156). FIG. 1 of *Ling* does not illustrate a channel quality estimator and the corresponding description of FIG. 1 does not describe any type of component "*configured to estimate characteristics of a plurality of transmission channels used for data transmission and to provide signal-to-noise and interference (SNR) information for one or more of the different spatial channels*." Similarly, FIG. 1 of *Ling* does not illustrate a transmit data processor and the corresponding description of FIG. 1 does not describe any type of component "*configured to receive and process the SNR information for transmission on a reverse link*." Despite this, the Examiner contends that the claimed channel quality estimator and the claimed transmit data processor are "inherently included in the receiver unit."

"To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999).

In the present case, the Examiner has failed to properly establish inherency, as the extrinsic evidence does not "make clear that the missing descriptive matter is necessarily present in the thing described in the reference." For example, the claimed channel quality estimator (missing descriptive matter) is not necessarily present in the receiver unit 150 (the thing described in the reference). Further, the claimed transmit processor (also missing descriptive matter) is also not necessarily present in the receiver unit 150.

These claimed elements are not necessarily present in the receiver unit 150, as the receiver unit 150, as described in *Ling*, is functional without these elements. In fact, the Examiner refers to disparate sections of *Ling* as teaching the features of the claimed channel quality estimator and the claimed transmit processor that the Examiner alleges is inherent in the receiver.

For example, the Examiner refers to column 18, lines 49-53 of *Ling* as teaching estimating characteristics of a plurality of transmission channels used for data transmission. Column 18, lines 49-53 of *Ling* reads as follows:

Full-CSI processing utilizes eigenmodes, as described above. Partial-CSI processing does not utilize eigenmodes, and may involve providing to the transmitter unit (e.g., via feeding back on the reverse link) the SNR for each transmission channel (i.e., receive diversity port), and coding accordingly based on the received SNR.

While this cited portion recites that (for Partial-CSI processing) SNR for each transmission channel *may* be fed back via a reverse link, it is silent as to any type of component for doing so or that SNR information *must necessarily* be fed back. Thus, this section certainly does not make it clear that a component configured with such functionality is “necessarily present” in the receiver unit 150.

Further, The Examiner refers to column 8, lines 27-31 of *Ling* as teaching providing signal-to-noise and interference (SNR) information for one or more of the different spatial channels. Column 8, lines 27-31 of *Ling* reads as follows:

The partial or full-CSI for the transmission channels to be used for a data transmission is typically determined at the receiver unit and reported back to the transmitter unit, which then uses the information to code and modulate data accordingly.

As this cited portion recites that CSI for transmission channels *is typically* determined at the receiver unit and reported back to the transmitter, it certainly does not make it clear that a component configured with such functionality is “necessarily present” in the receiver unit 150.

The Examiner also cites column 17, lines 7-8, which reads:

Partial CSI may include, for example, the SNR of the spatial subchannels.

As this cited portion only indicates that Partial CSI *may* include SNR for spatial subchannels, it does not teach that the Partial CSI *necessarily includes* SNR for the spatial subchannels. Thus, this section does not make it clear that a transmit data processor for receiving and processing SNR information for transmission on a reverse link is “necessarily present” in the receiver unit 150 as alleged by the Examiner.

For at least these reasons, Applicants submit that the Examiner has failed to properly establish inherency of the descriptive matter recited in claim 9 and missing from the receiver unit described in *Ling*. Accordingly, Applicants submit that claim 9 and its dependents are allowable and respectfully request withdrawal of this rejection with respect to these claims.

In rejecting claims 17 and 25, the Examiner also refers to the receiver unit 150 “as similarly applied to” claim 9, and incorrectly alleges that several of the elements are “inherently included in the receiver unit.” These missing elements include means for estimating characteristics of a plurality of transmission channels used for data transmission, means for providing signal-to-noise and interference (SNR) information for one or more of the different spatial channels, and a transmit data processor configured to receive and process the SNR information for transmission, for claim 17, and similar operations for claim 25.

As described above, however, Applicants submit that the Examiner has failed to properly establish inherency, as the extrinsic evidence does not “make clear that the missing descriptive matter is necessarily present in the thing described in the reference.”

Accordingly, for at least these reasons, Applicants submit that claims 17, 25 and their dependents, are allowable and respectfully request withdrawal of this rejection with respect to these claims.

Claim Rejections - 35 U.S.C. § 103

Claims 11-13, 19-21 and 27-29 stand rejected under 35 U.S.C. § 103(a) as

allegedly being unpatentable over *Ling*. Applicants respectfully traverse this rejection as follows.

Applicants respectfully submit that the present application and *Ling* were commonly owned or subject to an obligation of assignment to the same person at the time the invention of the present application was made, as noted in the Statement of Common Ownership below. Applicants also submit that *Ling* qualifies as prior art only under 35 U.S.C. §102(e). Therefore, Applicants respectfully submit that *Ling* is disqualified as prior art pursuant to 35 U.S.C. §103(c).

Accordingly, for at least these reasons, Applications submit claims 11-13, 19-21, and 27-29 are allowable and respectfully request withdrawal of this rejection.

STATEMENT OF COMMON OWNERSHIP

The present application (Serial No. 10/786,856; hereinafter the “Application”) and United States Patent No. U.S. 6,961,388, were, at the time the invention of the Application was made, owned by the same entity, or subject to an obligation of assignment to the same entity.

Allowable Subject Matter

Claims 10, 18 and 26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicants thank the Examiner for indicating these claims would be allowable if rewritten in independent form. However, as described above, Applicants submit their respective base claims are allowable in their current form. Therefore, Applicants have not rewritten these claims in independent form.

Conclusion

Therefore, for at least the reasons presented above with respect to all of the pending claims subsequent to entry of this response, Applicants assert that all claims are patentably distinct from all of the art of record. All objections and rejections having

been addressed, it is respectfully submitted that this application is in condition for allowance and a Notice to that effect is earnestly solicited. If any points remain in issue that the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

Charge Statement: For this application, the Commissioner is hereby authorized to charge any required fees or credit any overpayment to Deposit Account 17-0026.

Respectfully submitted,
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